

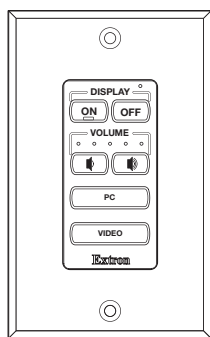


MLC 60 Series • Setup Guide

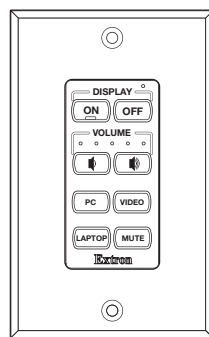
for the MLC 62 RS D, MLC 62 IR D, and MLC 64 RS VC D

IMPORTANT:
Go to www.extron.com for the complete user guide and installation instructions before connecting the product to the power source.

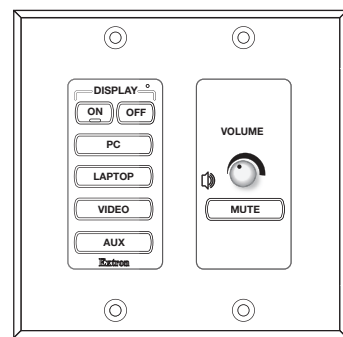
The MLC 60 D Series are keypad controllers for use in classrooms and meeting facilities. They mount to Decora®-style wallplates and therefore may be referred to as “D” models. The controllers have backlit soft touch buttons and can control common AV functions, including power, input switching, and volume. The MLC RS series provides RS-232 serial and IR ports for universal display control. In addition, a digital input and two relays are included for monitoring and controlling other systems in the room. The MLC 64 RS VC D has a volume control module that lets you raise and lower the volume on an Extron amplifier with a remote volume control port, such as the MPA 122 or MPA 401. The MLC 62 IR D provides IR control only. These products mount in one-gang or two-gang junction boxes and include black and white color options.



MLC 62 IR D



MLC 62 RS D

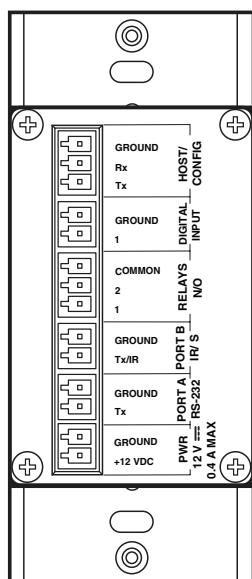


MLC 64 RS VC D

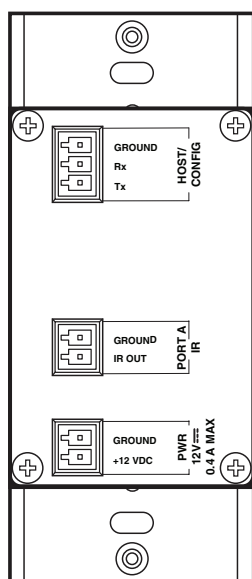
- NOTES:**
- Installation and service must be performed by authorized personnel only.
 - Check that the installation meets the local and state regulatory requirements, including building, electrical, and safety codes, as well as UL and ADA accessibility requirements.
 - For full installation, configuration, and operation details, see the *MLC 60 Series User Guide*, available at www.extron.com.

Installation Steps

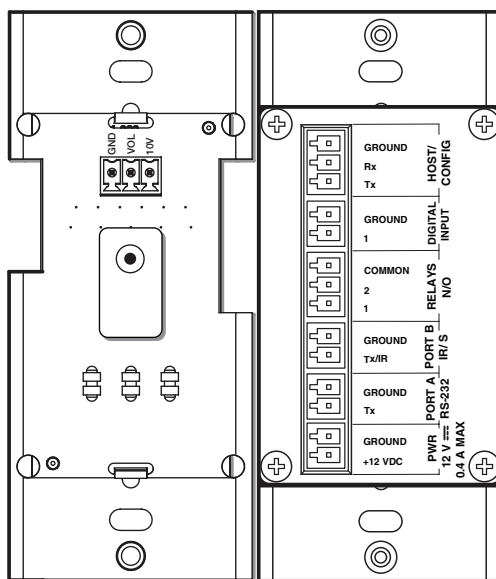
Rear Panels



MLC 62 RS D



MLC 62 IR D



MLC 64 RS VC D

- 1. Prepare the installation site.** The MLC 60 D models can be installed in a standard US one-gang or two-gang electrical wall box or mounting bracket (“mud ring”).

- a.** Install the electrical box, following the instructions provided with it, or the provided mounting bracket.

CAUTION: Ensure that the electrical box is properly grounded.

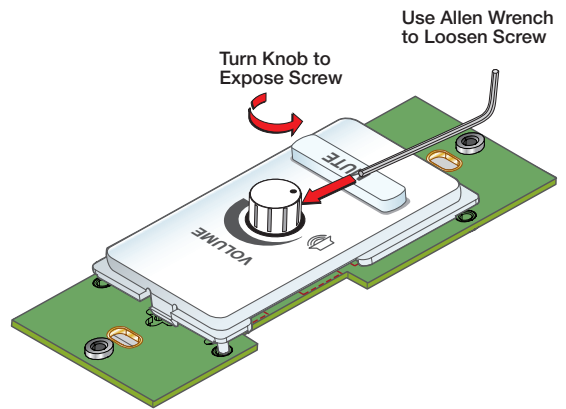
- b.** Prepare and pull the cables through the electrical box or mounting bracket.

MLC 60 Decora Series • Setup Guide (Continued)

2. Change the faceplate, buttons, and volume control knob as needed.

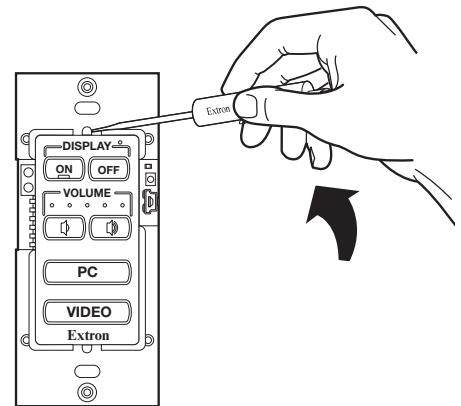
- a. (MLC 64 RS VC D only) If changing the faceplate on the MLC 64 volume control module, first remove the volume knob:

1. Rotate the knob until the dot on the knob is aligned with the bottom edge of the volume icon on the faceplate. The notches in the edge of the knob and the notch in the edge of the hole in the faceplate should be aligned, enabling you to access the hex screw that holds the knob in place.
2. Insert the small Allen wrench (provided) into the opening.
3. Rotate the Allen wrench one-half turn counterclockwise to loosen the hex screw, then lift off the knob.



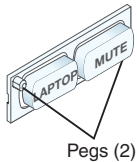
- b. Remove the faceplate from the MLC module as follows:

At the center top and bottom of the faceplate are tabs, which insert into the slots on the MLC circuit board. Insert the flat end of a small screwdriver into each of the holes at the top and bottom of the faceplate and press each tab inward until the faceplate is released (see the illustration at right).



- c. If desired, replace the buttons in the faceplate as follows:

1. From the front of the faceplate, press the button membrane to be replaced backward through its slots in the faceplate until it comes free. If replacing the faceplate, repeat this step until all the buttons are removed.

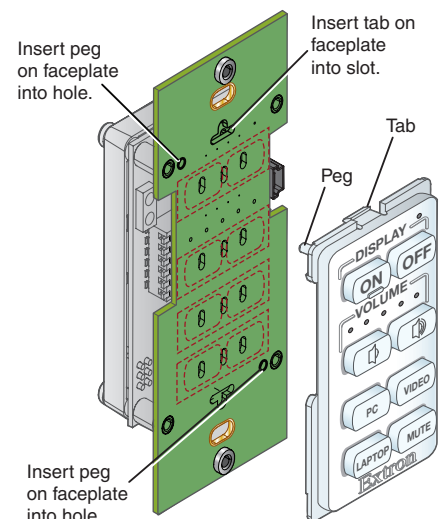


2. On the back of the faceplate, set the new button membrane at the desired location, with the two pegs in the upper-left and lower-right corners of the membrane (shown at left) in the holes at opposite corners of the row. Press the pegs and buttons of the membrane into the faceplate.

- d. Reattach the faceplate as follows (see the illustration at right):

Making sure that both the MLC and the board are upright, line up the tabs at the top and bottom of the faceplate with the slots on the board, and press the faceplate into the board until the tabs snap into place. The pegs in the upper-left and lower-right corners of the faceplate should be seated in the two diagonal holes on the MLC board.

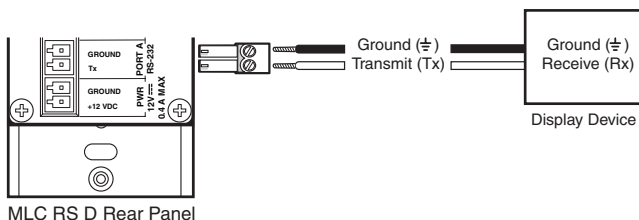
- e. (MLC 64 RS VC D only) If changing the volume control knob, press the new knob onto the spindle of the volume control module, making sure that the spindle is turned all the way to the left and that the dot on the knob is aligned with the bottom edge of the volume icon on the faceplate. Tighten the hex screw by rotating it one-half turn clockwise.



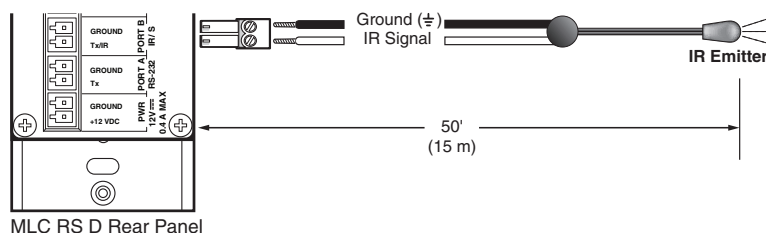
3. Connect the cables to the rear panel ports.

Attach the cables and IR emitters to the rear panel of the MLC and to the display device or switcher as required.

- **Port A RS-232 (RS models only):** Connect a display device or switcher to this serial port to be controlled via RS-232.

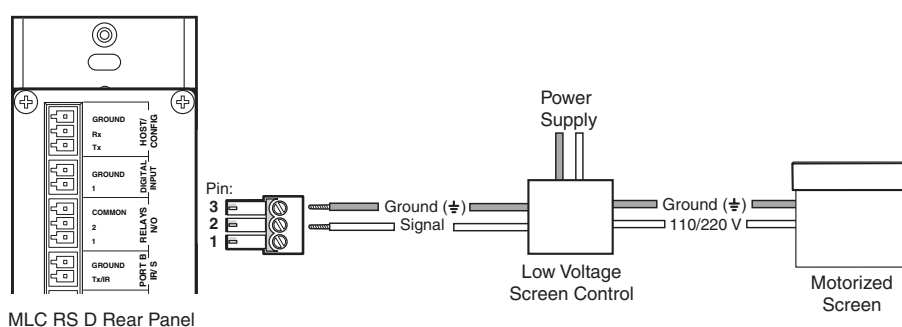


- **Port B IR/S (RS models) or Port A IR (IR models):** Connect a display device, switcher, or up to two IR emitters to this port. On RS models, you can configure Port B IR/S for either serial or IR communication, using the MLC 60 Series configuration program. On IR-only models, Port A IR supports only an IR connection.



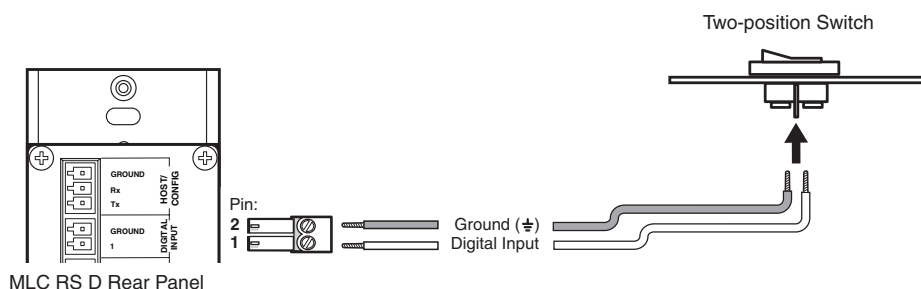
- **Relays port (RS models only):** The Relays port provides connections for two relays. Connect one or two devices (such as a low-voltage controller and a motorized screen, shown in the example below) to this port. The relay ports are normally open and rated for 24 VDC, 1 A (see the example below).

NOTE: If you are using both relay ports, connect the ground wires of both devices to common pin 3.



- **Digital Input port (RS models only)** — The Digital Input port enables you to connect a switch or sensor to control other devices in the room that are connected to the MLC serial, IR, or relay ports. The port measures the high and low states of the connection between the switch or sensor and the connected device. For the voltage thresholds, a voltage below 1.0 VDC is measured as **logic low**, and a voltage above 1.5 VDC as **logic high**. When a threshold between the states is crossed (from high to low and vice versa), the selected action occurs.

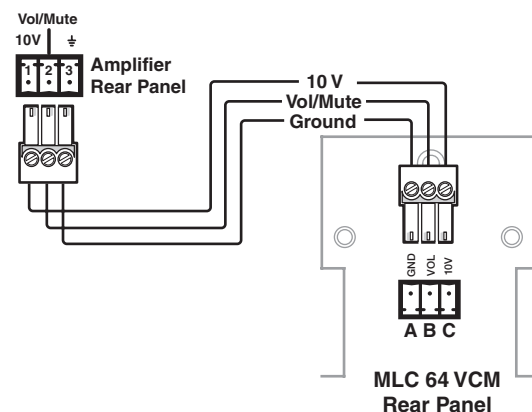
By default, this port is configured with a 5 V pull-up for use with basic non-powered switches. If the device being connected has its own power source, configure the port to disable the pull-up mode (see the configuration program help file for port configuration procedures). To wire this port, see the example below.



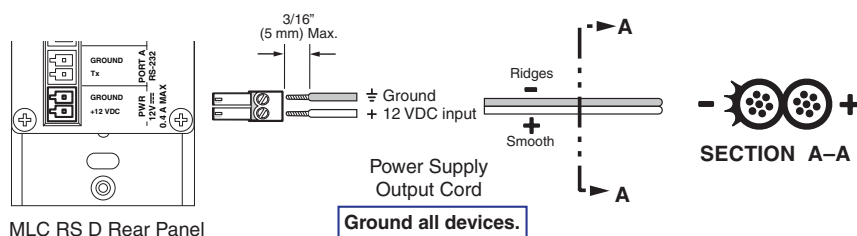
- **Wire the volume control module (MLC 64 RS VC D only)** — Connect the remote volume control port of an Extron amplifier to the 3-pole captive screw connector on the rear panel of the MLC 64 volume control module, as shown at right. No software configuration is required for this module.

In the illustration at right, **A** = ground, **B** = Volume and mute control, and **C** = 10 VDC reference voltage.

- NOTES:**
- Choose an Extron amplifier that is capable of remote volume control and muting. Not all Extron amplifiers have remote volume control ports. The MPA 122 or MPA 401 are examples of the type of amplifier to use.
 - Use shielded cable for audio connections to avoid inducing noise.

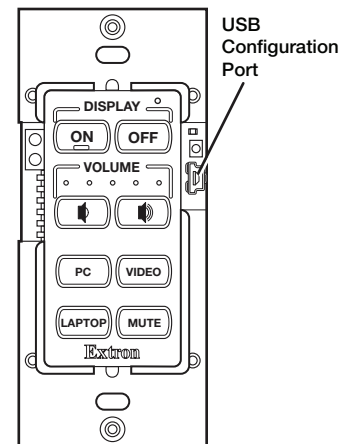


4. **Connect and apply power.** Connect the included power supply to the MLC as shown below, then connect power to all devices in the system.



5. **Configure the MLC buttons and ports** (see the *MLC 60 Series Configuration Program Help File* for the procedures):

- Load and install the configuration software from the Extron website or the provided DVD.
- Obtain device drivers. Drivers for the devices that will be connected to the MLC rear panel IR and serial ports can be obtained from the provided MLC software DVD or downloaded from the Extron website at www.extron.com. You can also obtain them using the configuration software if an Internet connection is available.
- Connect the MLC to the computer, using a USB A to USB mini B cable between the MLC front panel USB port (shown at right) and the computer USB port. Alternatively, use an RS-232 cable to connect the MLC rear panel Host/Config port to the computer serial port.
- Upload the configuration to the MLC.



NOTE: The volume control module of the MLC 64 RS VC D is standalone and requires no configuration.

6. **Test the system** to ensure that the MLC is functioning properly.
7. **Mount the MLC to an electrical box or a Decora mounting bracket.**
- Secure the MLC unit into a mounted electrical box using the provided screws in the oval slots at the top and bottom of the unit (follow the instructions provided with the electrical box); **or**
 - Mount the MLC to a Decora mounting bracket (see the *MLC 60 Series User Guide* for the procedure).

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